Items to include on Red line Drainage Plans

8/1/16

1. Existing drainage patterns should be clearly shown.
2. Existing ditches should be marked (and labeled if not clear), with a continuous series of arrows for the extent of the ditch.
3. Do not use overland flow arrows to represent existing ditches; they should only be used for non-ditch overland flow.
4. Existing pipe condition (especially if retaining or plugging), any erosion/problem notes, etc. should also be noted. Existing ditch descriptions should include water depth (if applicable) and type of cover/condition for outfall ditches.
5. Note the condition of existing ponds/spillways within the project area. Note spillway/outlet locations and any draw down pipe sizes.
6. Tops/inverts should be marked on red-line set, incl. cross pipes (and equalizer pipes).
7. Show all required TDE/PDE on plans so that it can be reviewed.
8. Show TB for major drainage structures.
9. Proposed ditches should be labeled and stationing filled in for ditch details.
10. Show D.A. boundaries for all ditches/inlets/pipes. If D.A.s extend off sheet, provide readable contour map at an appropriate scale that shows full delineation of D.A.s.
11. Show Q10/V10 for all ditches entering (or discharging adjacent to) wetlands, and include all variables used in analysis on red-line set.
12. Draft buffer zones (BZ1 & BZ2). Be careful about drafting around acute angles – do not just Copy Parallel.
13. Document design notes on red-lines as needed (to explain design decisions and document other issues not readily apparent).
14. Do not turn off any levels/reference files that are required for R/W plans (such as property owners).
15. Cross pipes and design data block from Pipe Data Sheet should be shown on the profiles.
16. Include all variables on ditch comps (incl. Manning's 'n'/side slopes).

Items preferred to be on red-line set plan sheets, but not required as long as provided separately:

1. Ditch computations
2. Outlet (pre/post) analysis summary
3. Overpass spread computations